*Numbers (percentages) of subjects in whom HLA-DR4 was expressed, by group*

| Group | Expression of HLA-DR4 |
|---|---|
| Senior academics | 4/4 (100) |
| Staff with a PhD | 8/12 (66) |
| Research workers | 3/15 (20) |
| Junior doctors | 0/4 (0) |
| Secretaries | 0/2 (0) |
| Controls | 103/297 (34·7) |

then blotted the products into nitrocellulose filters and hybridised them to specific oligonucleotide probes for the DR4 subtypes Dw4 (0401), Dw10 (0402), Dw13 (0403), Dw14 (0404, 0408), and Dw15 (0405).

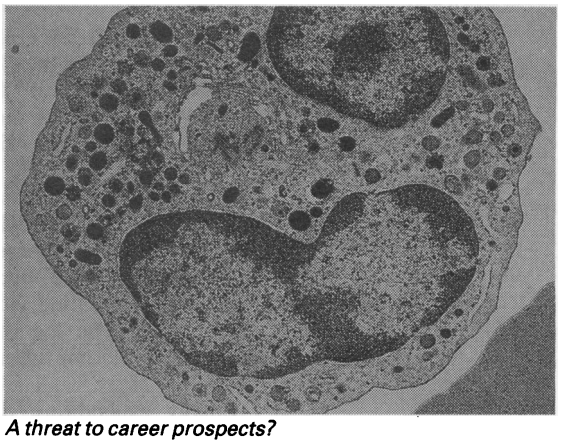
Also, we performed restriction fragment length polymorphism, using the method of Bidwell and Jarrold.[4] This confirmed the oligonucleotide probing and determined the presence of homozygous alleles. We used Fisher's exact test to compare the groups in terms of how often HLA-DR4 was expressed.

## Results

The table shows the distribution of expression of HLA-DR4 among the different groups. HLA-DR4 was expressed in a significantly larger proportion of the senior academics ($P<0·05$) and staff with a PhD ($P<0·01$) than of the controls. HLA-DR4 was also expressed in a significantly larger proportion of the senior academics and staff with a PhD combined than of the junior doctors ($P<0·05$).

## Discussion

There is no doubt that HLA-DR4 is linked with rheumatoid arthritis and that it affects disease outcome.[2,5] Its association with academic performance, however, has not been previously described and will need to be confirmed by further studies. Interestingly we know the HLA type of only one other professor of rheumatology in Britain, and he too is DR4 positive (Professor Panayi, personal communication). The lamentably low distribution of this epitope among the junior doctors in our department not only has grave implications for their careers but also confirms the suspicions of the scientists in our department regarding the intellect (or lack of it) of these doctors. Interestingly, the most recent recruit to the MB PhD programme is also DR4 positive; aspiring colleagues should watch his career with concern. As HLA-DR4 is a fixed genetic factor there seems little that we can do to alter the poor prospects of those who are DR4 negative.



*A threat to career prospects?*

These findings, however, are also of some concern to the senior members of our department with regard to their long term health as DR4 positivity probably influences their risk of developing rheumatoid arthritis. To date, two of the senior academics and one PhD fellow have had an episode of transient symmetrical synovitis, emphasising their uncertain prognosis. Thus these achievers of excellence may have only brief and glorious careers before the onset of this crippling disease.

It is often said that chance associations have led to some of the greatest scientific discoveries. We believe that in this particular case this is extremely unlikely!


1 Emery P, Salmon M, Bradley H, Wordsworth P, Tunn E, Bacon PA, *et al.* Genetically determined factors as predictors of radiological change in patients with early symmetrical arthritis. *BMJ* 1992;305:1387-9.
2 Gough A, Faint J, Salmon M, Hassell A, Wordsworth P, Pilling D, *et al.* Genetic typing of patients with inflammatory arthritis at presentation is predictive of outcome. *Arthritis Rheum* 1994;37:1166-70.
3 Wordsworth BP, Lanchbury JSS, Sakkas LI, Welsh KI, Bell JI. HLA DR4 subtype frequencies in rheumatoid arthritis indicative that DRb1 is the major susceptibility locus within the HLA class II region. *Proc Natl Acad Sci USA* 1989;86:10049.
4 Bidwell JL, Jarrold EA. HLA DR allegenotyping using exon specific cDNA probes and amplification of rapid minigel methods. *Mol Immunol* 1986;23:1111-6.
5 Van Zeben D, Hazes MNW, Zwinderman AH, Cats A, Schreuder GMT, D'Amaro J, *et al.* Association of HLA-DR4 with a more progressive disease course in patients with rheumatoid arthritis. *Arthritis Rheum* 1991;34:822-30.


# Polythenia gravis: the downside of evidence based medicine


Down End Research Group


The impetus for this case report and study protocol was the admission to hospital of a senior physician with a fractured neck of femur. On the night of the accident the patient had got up to pass water and slipped on a pile of journals still in their plastic wrappers which were lying on the floor beside his bed. The history revealed gradually increasing nocturia compatible with age related benign prostatic hyperplasia. On direct questioning he admitted that he had recently performed a bone densitometry measurement on himself and found a slight reduction of bone density compatible with a male menopause some 10 years earlier. He also admitted that he felt an increasing sense of guilt and inadequacy associated with an inability to keep up with the journals. On the DEWLAP index (see table 1) he scored moderately high for his age. His JASPA score (see table 2) was 5, consistent with a mound of journals kept by the bed, avalanching both under the bed and across the room. The oldest journal in the pile was nearly five years old, and the JOCA (journal cumulative age) index (total number of journals mutiplied by the age of each one) was in excess of 100.

The patient made an uneventful recovery after surgery and returned to clinical duties in three months despite being in moderate continuous pain and receiving regular analgesia; his walking distance was only 30 yards. Follow up at this time by the orthopaedic consultant briefly recorded an "excellent result," and the patient was discharged from clinic. Paradoxically there was a significant improvement in his DEWLAP score, perhaps because he was no longer able to get up to London (to attend meetings of college committees) and because ward rounds were abandoned after the first two patients because he could not limp any further. Despite his pain and disability a dramatic overall improvement in his affect was also noted. This followed his decision, after his stay on the orthopaedic ward, to donate all his journals (unread) to needy doctors in Third World countries. His JASPA score fell to 0 after this decision.

## Comment

We have named the condition described above "polythenia gravis." We believe that this may be the first of many cases that will subsequently be seen as the


Authors are detailed at the end of this paper.



*BMJ* 1995;311:1666-8

**Table 1**—*DEWLAP (deteriorating work levels in aging physicians) index*

| Score name | Score system | Points and comments |
|---|---|---|
| WART (ward round time) | 1-2 Hours | 0 |
| | 2-4 Hours | 1 |
| | 4-6 Hours | 2 (senile) |
| AWAY (absences from ward round per year) | 0 | 0 |
| | >50% | 1 |
| | 100% | 2 |
| ANECDOTAGE (stories beginning with "I remember when" etc) | <4 Per ward round | 0 |
| | 4-6 Per ward round | 1 |
| | >6 Per ward round | 2 |
| | Repeated anecdote | Double score |
| NAFS (names of fellow staff) | Names of junior staff | 0 |
| | Only names of female junior staff | 3 |
| | Names of consultant colleagues | 1 |
| | Names of deceased colleagues | 6 |
| DEWLAP index | 0 | Are you one of these new Calman consultants appointed in your early 20s? |
| | 1-3 | Are you doing enough committee and college work for a merit award? |
| | 3-6 | Depressingly normal |
| | >7 | Have you actually read this paper or were you told about it by a colleague over lunch? |

**Table 2**—*JASPA (journal associated score of personal angst) score*

| Question | Score for answer "yes" |
|---|---|
| **J:** Do you feel anxious that you should be reading more Journals? | 1 |
| **A:** Do you ever feel Anger towards people who write lots of papers? | 1 |
| **S:** Do you ever use journals to get you to Sleep? | 1 |
| **P:** Are there Piles of Periodicals by your bed, lavatory, etc? | 1 |
| **A:** Do you obsessively scan journals for Articles by Authors known to you, then just turn to the obituaries? | 1 |
| Total and interpretation | 0 (?liar)<br>1-3 (normal range)<br>>3 (sick; at risk for polythenia gravis and related conditions) |

average age of doctors rises, the number of journals proliferates, and as continuing medical education preys on doctors' sense of inadequacy and leads to chronic insomnia, with ever growing piles of journals beside the bed. More importantly, we believe that this case of polythenia gravis may be the tip of an iceberg, both in terms of numbers and as the first and most easily recognised in a cluster of conditions that make up a previously unrecognised adverse consequence of evidence based medicine.

The trial protocol we describe is aimed at looking at possible management of the problem before it has even been fully defined. We believe this fulfils exactly the spirit of the government's new initiative towards funding relevant medical research related to prevention rather than treatment.

## Proposed trial protocol

*Title*—A randomised controlled trial comparing clinicians receiving VBJs (very boring journals) with those receiving a periodical of choice (POC) using a Zelen's double consent randomisation design with the JASPA score as the outcome.

*Aims of study*—Primarily to reduce the JASPA score in doctors at risk; secondarily to halt the incipient epidemic of polythenia gravis.

*Study group*—All clinicians who claim to read *any* journals.

*Outcome measure*—JASPA score.

*Power of study*—Mean overall reduction of 30% in JASPA score. Sensitivity 80%; specificity 80%. 250 subjects required in each arm.

### METHODOLOGY

All doctors entering this trial will be randomised either to the VBJ group or the POC group. Exclusion criteria are those doctors who claim not to read any journals. At the insistence of the local ethics committee the POC is to be *Private Eye*, not *Penthouse* as originally proposed.

A feasibility study showed that all but one doctor had a strong preference for being allocated to the POC arm. We therefore rejected a subject preference trial, fearing a veto by a statistician when we sought publication. We propose therefore a modification of Zelen's double consent randomisation, which involves informing trial participants of their group allocation some time after randomisation. In this case only the control group will be informed (in case they wonder what is going on). The control group will continue to receive their VBJs as before, but they will be informed that they are now part of a study and will be asked to complete a JASPA questionnaire. They will be offered £2000 as compensation (*not* payment) for the time involved in completing this two minute checklist. They will not be required to read the journal.

For the duration of the trial the POC group will not be told that they are entered into a trial but will instead receive a copy of *Private Eye* wrapped inside the outer cover of a standard VBJ and then placed in a standard polythene wrapper. It is possible that some clinicians will complain about this treatment and will write to the editor of that journal. Their number is expected to be extremely small and therefore no account is taken of this in the power analysis. Clinicians in the POC group will also be asked to fill in a JASPA questionnaire at the begining and end of the study. Total compliance is once again anticipated by sending, at the same time as the JASPA, a plain brown envelope containing a letter from the merit award committee requesting a curriculum vitae and emphasising that a candidate's cooperation with local management and national research are looked on most favourably when names for a merit award are being selected. No further problems with compliance are anticipated.

## Discussion

The purpose of this trial is to show that not only do journals break necks of femurs but they also produce a generalised global sense of angst in clinicians. We feel that the unread journals themselves have a pernicious effect on the general health of doctors and that the recent thrust towards evidence based medicine will put even more doctors at risk of a raised JASPA score. A significant fall in JASPA score in the POC group during the study would be a strong indication that medical journals are at least in part responsible for the overall malaise in the medical profession at the moment. If this is shown to be the case then we would recommend that publication of all medical journals should be monitored by Ofmag (office of management of medical angst and guilt). A journal should receive a full licence only if its publishers can show that the JASPA score of clinicians who receive their journal is

either unchanged or reduced by its arrival on their doorstep. We would further recommend that each specialty should be allowed only a fixed number of journals (the number to be determined by a Delphic consensus). Journal publishers would have to bid against each other for access to these "slots," supplying a manifesto of journal contents aimed at showing why the JASPA score would fall. Furthermore, clinicians should be allowed to receive only a fixed number of journals (again depending on specialty). Persistent attempts by a consultant to take more journals than allowed would result in a referral to a JAM (journal angst management) psychologist.

Only in this way will it be possible to nip in the bud what we see as a pernicious epidemic which may yet bring the medical profession to its knees.

Funding: None.

Conflict of interest: No author has any interest in this paper, nor will they take any responsibility for its conclusions. No author will use this paper to try to obtain promotion within their department, nor will they quote it in their departmental HEFCE returns. All have promised not to quote it when trying to obtain research grants nor to use it in any other unethical way.

The authorship of this paper consists of a group of clinicians, non-clinicians, and lay people. Of the three clinicians, two are psychiatrists and the third is a non-physician C merit award holder (the least deserving). The non-clinicians are a psychologist (sitting on a number of major grant giving bodies in medicine) and a public health doctor sunk deeply in audit. The three lay members are an anthropologist studying human resource use, a jeweller living off human resource use, and a lawyer currently writing a new constitution to ensure fair distribution of these resources.

Correspondence should not be addressed.

# Why do old men have big ears?

James A Heathcote

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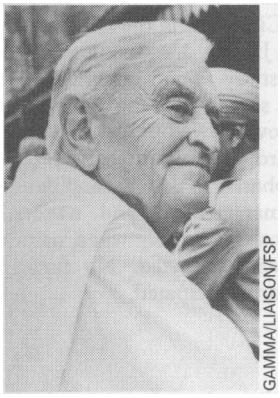
James A Heathcote, *general practitioner*

In July 1993, 19 members of the south east Thames faculty of the Royal College of General Practitioners gathered at Bore Place, in Kent, to consider how best to encourage ordinary general practitioners to carry out research. Some members favoured highly structured research projects; others were fired by serendipity and the observations of everyday practice. Someone said, "Why do old men have big ears? Some members thought that this was obviously true—indeed some old men have very big ears—but others doubted it, and so we set out to answer the question "As you get older do your ears get bigger?"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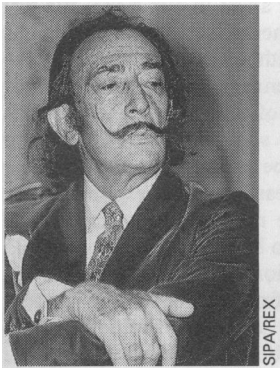
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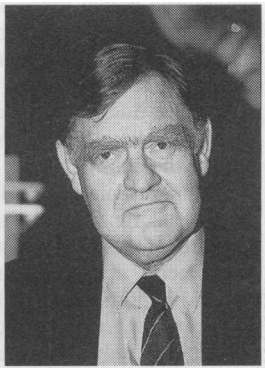
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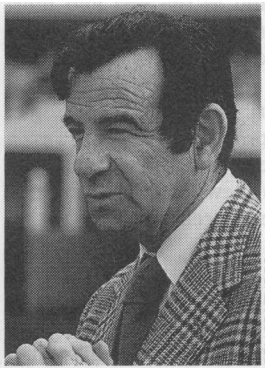
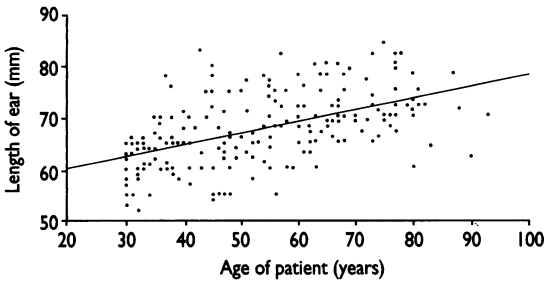

REX FEATURES

*Some do have 'em—and some don't*

## Methods and results

Four ordinary general practitioners agreed to ask patients attending for routine surgery consultations for permission to measure the size of their ears, with an explanation of the idea behind the project. The aim was to ask consecutive patients aged 30 or over, of either sex, and of any racial group. Inevitably it was sometimes not appropriate—for example, after a bereavement or important diagnosis—to make what could have seemed so frivolous a request, and sometimes (such as when a surgery was running late) patients were not recruited. The length of the left external ear was measured from the top to the lowest part with a transparent ruler; the result (in millimetres), together with the patient's age, was recorded. No patients refused to participate, and all the researchers were surprised by how interested (if amused) patients were by the project. The data were then entered on to a computer and analysed with Epi-Info; the relation between length of ear and the patient's age was examined by calculating a regression equation.




*Scatter plot of length of ear against age*

In all, 206 patients were studied (mean age 53·75 (range 30-93; median age 53) years). The mean ear length was 675 mm (range 520-840 mm), and the linear regression equation was: ear length = 55·9 + (0·22 × patient's age) (95% confidence intervals for B coefficient 0·17 to 0·27). The figure shows a scatter plot of the relation between length of ear and age.

It seems therefore that as we get older our ears get bigger (on average by 0·22 mm a year).

## Comment

A literature search on Medline by the library at the Royal College of General Practitioners that looked for combinations of "ears, external," "size and growth," "males," and "aging" produced no references.

A chance observation—that older people have bigger ears—was at first controversial but has been shown to be true. For the researchers the experience of involving patients in business beyond their presenting symptoms proved to be a positive one, and it was rewarding to find a clear result. Why ears should get bigger when the rest of the body stops growing is not answered by this research. Nor did we consider whether this change in a particular part of the anatomy is a marker of something less easily measurable elsewhere or throughout the body.

I acknowledge the generous help of Drs Colin Smith and David Armstrong and Ms Sandra Johnston with the data analysis; the work of my fellow data collectors, Drs Ian Brooman, Keren Hull, and David Roche; and the support of all members of the Bore Place group.